12-1984

Exploring Overhill Cherokee Material Culture Patterning

Kurt C. Russ
University of Tennessee - Knoxville

To the Graduate Council:

I am submitting herewith a thesis written by Kurt C. Russ entitled "Exploring Overhill Cherokee Material Culture Patterning." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Anthropology.

Gerald F. Schroedl, Major Professor

We have read this thesis and recommend its acceptance:

Charles H. Faulkner, Jefferson Chapman

Accepted for the Council:
Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

To the Graduate Council:

I am submitting herewith a thesis written by Kurt C. Russ entitled "Exploring Overhill Cherokee Material Culture Patterning." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Anthropology.

Gerald Schroedl, Major Professor

We have read this thesis
and recommend its acceptance:

Accepted for the Council:

Vice Provost
and Dean of The Graduate School

EXPLORING OVERHILL CHEROKEE MATERIAL CULTURE PATTERNING

A Thesis

Presented for the

Master of Arts

Degree

The University of Tennessee, Knoxville

Kurt C. Russ

December 1984

ACKNOWLEDGMENTS

I would like to express my appreciation to Dr. Gerald F. Schroedl, Dr. Charles H. Faulkner, and Dr. Jefferson Chapman, the members of my thesis committee, for commenting on earlier drafts of this paper and for contributing to my overall educational experience at The University of Tennessee, Knoxville. Special thanks are extended to Dr. Schroedl for very real support, encouragement, and guidance.

Other individuals also contributed to this research and are herein acknowledged; Wayne D. Roberts, for assistance with the Citico lithic analysis, and William W. Baden, for computer assistance which provided access to much needed data.

Much of the data used for this thesis was derived from records and specimens housed in the Frank H. McClung Museum, The University of Tennessee, Knoxville. The author acknowledges the role of the Tennessee Valley Authority, the National Park Service, the Department of Anthropology and the Museum for the recovery, curation, and access to these data.

ABSTRACT

Cherokee acculturation as revealed in the patterned material culture remains from the Colonial through the Federal Period is examined. The utilization of a quantitative functional classification scheme facilitates artifact classification and the formulation of assemblage profiles and artifact patterns for the Colonial Period based on data from Chota/Tanasee (40MR2/40MR62), Citico (40MR7), and Tomotley (40MR5), the Federal Period based on data from Chota/Tanasee (40MR2/40MR62) and Citico (40MR7), and Mialoquo based on data from this site, 40MR3. The expectation that the Mialoquo Pattern would contrast with both the Colonial and Federal Period Patterns and therefore be identified as Revolutionary Period is not supported by statistical analysis. Rather, this analysis indicates overall similarity between the respective patterns. Comparison at the group and assemblage profile levels, however, reveals differences which reflect processes of Euro-American contact with the Cherokee.

TABLE OF CONTENTS

LIST OF TABLES

TABLE PAGE

CHAPTER I

INTRODUCTION

I. STATEMENT OF THE PROBLEM

Material culture analysis oriented towards the recognition of quantitative patterning in the archaeological record is a necessary prerequisite to the delineation of culture process (Binford 1968; South 1974, 1977, 1978). That the goal of identifying culture process is an ultimate aim of archaeological research is well established (Binford 1962, 1968; Plog 1974; Thomas 1979; Watson, LeBlanc, and Redman 1971).

In this context, the research described here defines and explores material culture patterns for the Overhill Cherokee with respect to discrete ethnohistoric periods of occupation in the Little Tennessee River Valley. Historic Cherokee occupation in the valley has been segmented into the Contact (circa 1715-1745). Colonial (1746-1775), Revolutionary (1776-1795), and Federal (1796-1819) Periods (Ford 1982:1; Newman 1977:8).

These periods were defined as being representative of distinct Euro-American diplomatic and trade policies towards the Overhill Cherokee, with the expectation that they would each have different expressions archaeologically. Therefore, an analysis of archaeological patterns which are defined with respect to these

periods should provide information regarding material culture change and acculturation.

Questions regarding Overhill Cherokee material culture change and acculturation have been foremost among those pursued in research conducted by the Tellico Archaeological Project. Perhaps the most important component of this project has been the excavations conducted at numerous Overhill Cherokee sites including Chota/Tanasee (40MR2/40MR62), Mialoquo (40MR3), Tomotley (40MR5), Toqua (40MR6), Citico (40MR7), Tuskegee (40MR24/64), and Starnes (40MR32) (Figure 1).

Newman (1977) was responsible for the implementation of pattern recognition studies of data obtained from the Chota/Tanasee (40MR2/40MR62) excavations. Based on the ethnohistorically defined periods and the ability to assign certain of the Cherokee features (by dating the artifacts contained in them) to the respective periods, Newman (1977) established an internal chronology for the site and examined the patterning of the Euro-American artifacts in terms of this chronology. The predominate archaeological component at Chota/Tanasee was Colonial. Ford (1979) followed Newman's approach in the analysis of the Citico (40MR7) site, and later, utilizing a more holistic classification scheme, examined Overhill Cherokee artifact patterning during the Federal Period (Ford 1982).

Despite Newman's (1977) and Ford's (1979, 1982) work which provided important information about the Colonial Period and defined a Federal Period Cherokee Material Culture Pattern,

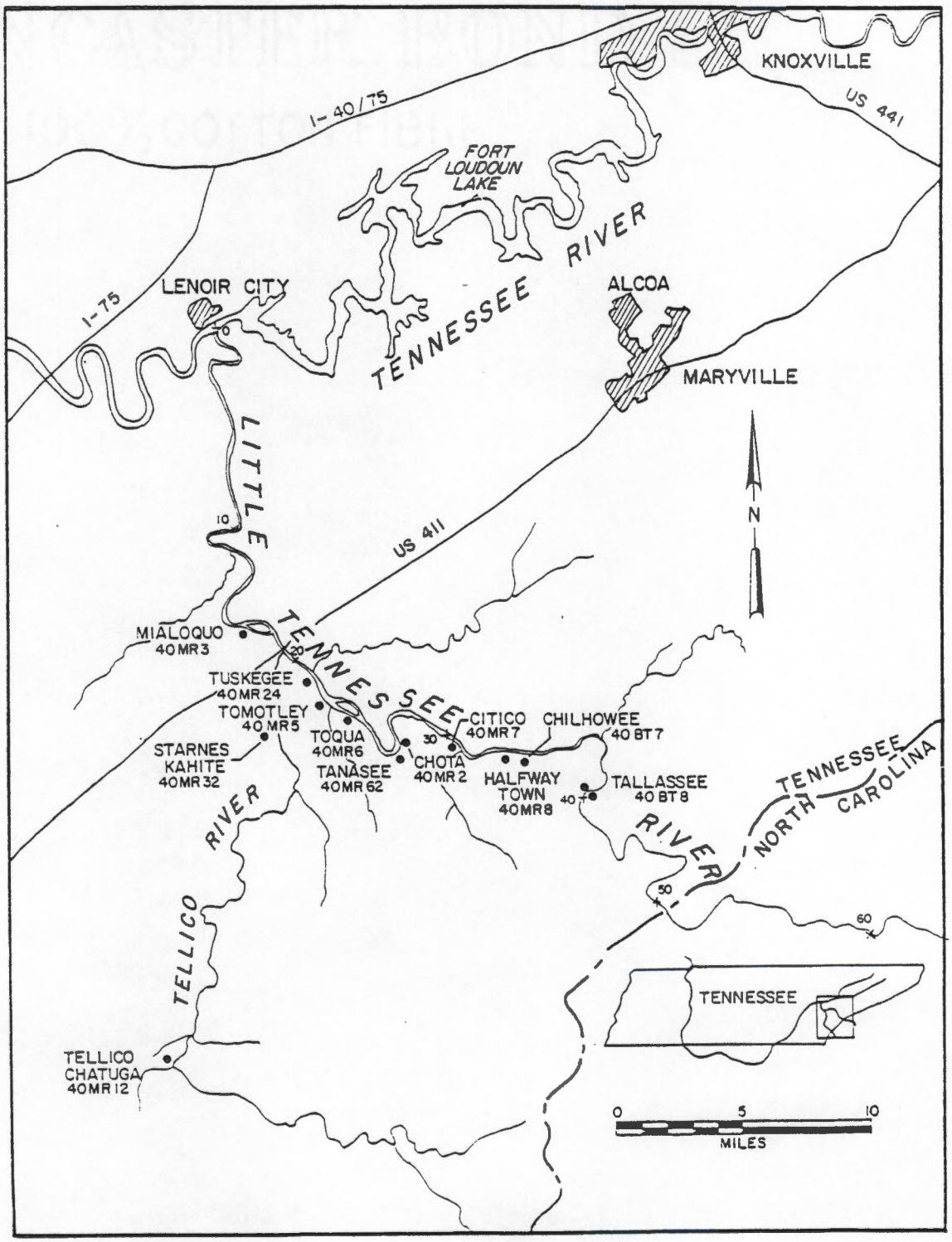

Figure 1. Map showing the location of Chota, Tanasee, Tomotley, Citico, Mialoquo, and other eighteenth century Overhill Cherokee towns located in the lower Little Tennessee River Valley (from Schroedl 1978).

no sites provided data for the Revolutionary Period and hence, it is poorly understood archaeologically.

A recent analysis of the Mialoquo site (Russ and Chapman 1983) revealed that it was occupied during the Colonial and Revolutionary Periods. In addition, the quantified assemblage seemed intuitively different from both the Colonial and Federal Period archaeological records. As a result, the expectation that Mialoquo would either be defined archaeologically as Revolutionary Period or offer important information about this period was articulated by Russ and Chapman (1983). This archaeological expectation as well as more general questions regarding Overhill Cherokee material culture change and acculturation are pursued here.

Preliminary analysis of material culture patterning for the Colonial and Federal Periods indicates that differences are apparent in the archaeological patterns for the respective periods (Russ 1982; also see Ford 1982). Hence, a research approach which defines and compares archaeological patterns based on these ethnohistorically defined periods is supported and relevant to addressing those questions posed in this study.

The specific goals of this study are to: 1) define a Colonial Period Overhill Cherokee Material Culture Pattern; 2) define the Mialoquo (40MR3) material culture assemblage in terms of artifact patterning; 3) test the assumption that the Mialoquo Pattern, which is defined ethnohistorically as containing both Colonial and Revolutionary Period components, is archaeologically

distinctive from both the Colonial Period and Federal Period Material Culture Patterns; 4) assess the artifact patterns for understanding Overhill Cherokee acculturation; 5) suggest the implications of this research for providing information relevant to understanding the Cherokee Chickamauga sites; and 6) discuss the contribution this research makes towards the formulation of an Overhill Cherokee Frontier Aboriginal Artifact Pattern.

A reassessment of archaeological data from three Overhill Cherokee sites located in the lower Little Tennessee River Valley (Figure 1), namely Chota/Tanasee (40MR2/40MR62), Citico (40MR7), and Tomotley (40MR5), aimed at extracting a Colonial Period Material Culture Pattern is prerequisite to the effective realization of these research goals. Based on ethnohistorical distinctions and visual inspection of archaeological materials dated to the Colonial Period, it is apparent that this period differs from the Revolutionary and Federal Periods. However, the extent of these differences is unknown, as a Colonial Period Material Culture Pattern has not been defined heretofore. Such a definition is developed here from quantified data and is the basis for assessing the degree to which the Colonial Period differs from the other periods. As a result, intuitive inferences about Colonial Period patterning are no longer necessary.

Formulation of an artifact pattern for Mialoquo (40MR3) is an integral part of this analysis. Given the ethnohistoric definition of Mialoquo as containing a Revolutionary Period

assemblage (Russ and Chapman 1983), it is expected that the archaeological patterning of these materials will deviate from both the Colonial and Federal Period Patterns. A detailed comparison of these patterns should reveal the extent to which they differ from one another and thus the implications of these differences for an archaeological definition of the Revolutionary Period may be considered. In the same context, the following questions are addressed: 1) Are the differences between the various archaeological patterns statistically significant? and 2) To what extent can predictions about a Revolutionary Period Pattern be made based on the patterning of remains from Mialoquo?

In regard to the implications of this research for understanding the Cherokee Chickamauga sites, the archaeological expectation is that material culture remains from these sites will be patterned similar to Mialoquo because these sites were occupied just after the major abandonment of Mialoquo and inhabited by many Overhill Cherokee, including Dragging Canoe (chief of Mialoquo), who previously resided at Mialoquo and other Overhill towns.

In general, this research contributes in two major ways to the formulation of an Aboriginal Frontier Artifact Pattern. First, by utilizing a quantitative functional classification scheme incorporating both Native American and Euro-American artifacts for the definition of material culture patterning, a framework is established which should facilitate meaningful comparisons between Indian and European Frontier sites. Secondly, by defining

material culture patterns in terms of discrete ethnohistoric periods for the Overhill Cherokee and by utilizing the most complete data available from those periods, the goal of defining an Overhill Cherokee Frontier Artifact Pattern is realized. The definition of such a pattern has obvious implications for: 1) answering questions and generating new questions regarding Overhill Cherokee material culture patterning and acculturation; and 2) contributing information regarding Overhill Cherokee archaeological patterning which, when combined with similar data from other Indian occupations, will be relevant to the definition of a more general Aboriginal Frontier Pattern.

II. PREVIOUS APPROACHES TO ANALYSIS OF MATERIAL CULTURE REMAINS FROM NATIVE AMERICAN CONTACT SITES

Attempts to apply acculturation theory as espoused by Redfield, Linton, and Herskovits (1936) and later expanded upon by Linton (1940) and Spicer (1961) to archaeological research have met with limited success. Typically, archaeologists have simply identified and described European artifacts from Native American contact sites and, in some cases, gone on to discuss acculturation based solely on the presence of these artifacts in the archaeological record. Other archaeologists have not simply equated the acquisition of Euro-American artifacts with acculturation, but have considered the entire cultural context of the contact situation.

Despite this perspective, most studies show more concern for explaining the historical rather than the archaeological record.

More recently, attempts have been made to effectively operationalize acculturation theory for use in archaeological analyses of contact sites. Both Quimby (1966) and White (1975) analyze European artifacts from contact sites and suggest that the occurrence, native modification, and imitation of these artifacts is in itself a measure of acculturation. The two major problems with this approach are: 1) that by ignoring the entire Native American assemblage including ceramics, lithics, and faunal materials and dealing only with the Euro-American items acculturation is poorly measured; and 2) as Brown (1979) and Fitting (1976) have warned, assignment of artifact function is problematic as actual Indian use of Euro-American made artifacts may have been highly variable without any correspondence with Western European values or functions.

In contrast, Brown's (1979) research concerning functional group changes and Indian acculturation in the Yazoo Bluffs region of the Mississippi Valley specifically addresses the issue of assessing function of aboriginal artifacts. However, in utilizing South's (1977) functional classification scheme in unmodified form, Brown failed to select an organizational framework sensitive to the specific research questions he attempted to address. Furthermore, by including only the historic European artifacts in his classification, Brown (1979:152) did not monitor Indian acculturation but rather defined a French Artifact Trade Pattern. His major

contributions were: 1) caution against assuming European functions for artifacts on historic aboriginal sites; and 2) presentation of ethnohistoric information relevant to functional assessment of artifacts which once operated in the Native American systemic context.

Research conducted by Duran and McKeown (1980) attempted to investigate Indian acculturation based on archaeological materials from twentieth century Navajo sites on the Ojo Amarillo in New Mexico. In selecting an artifact typology for the analysis of the material culture remains, several typologies were investigated. South's functional typology was considered inappropriate as it "fails to deal with problems of multiple functions, reuse, and recycling, and how these may affect acculturation" (Duran and McKeown 1980:1030). Instead, Duran and McKeown chose a modified version of Adams, Gaw, and Leonhardy's (1975) classification system which divides artifacts according to the material from which they were manufactured. Further distinctions were made according to technology of manufacture and structural attributes. Architectural remains were not categorized as they were considered not particularly sensitive to the research questions being addressed. Duran and McKeown's work is difficult to use because architectural artifacts are excluded from their classification scheme, data presentation, and analysis.

Harmon (1983) recently initiated an acculturation study of the Lower Cherokee in northwestern South Carolina. All

Euro-American materials (except nonfunctionally identifiable metal) from five sites were ordered according to South's (1977) functional classification scheme and an Historic Indian Artifact Pattern was abstracted. Subsequently, this pattern was compared with both the Carolina and the Frontier Artifact Patterns. The explicit goals of this research were to: 1) assess the impact of European material culture on Lower Cherokee culture during the Colonial Period by comparing the use of these artifacts quantitatively for the two groups; and 2) explore how different recovery techniques affect site artifact assemblages (Harmon 1983:1-2,4). This research is important in that it represents an initial attempt to look at material culture patterning for the Lower Cherokee; however, any attempt to assess the impact of certain trade goods on a given culture must consider the entire material culture assemblage that could be potentially affected. While an examination of the Euro-American artifacts is enlightening in terms of monitoring British trade, it does not adequately address Harmon's first research goal. Although the second research goal is a worthy and often neglected area in archaeological research, recognition of the problem does little towards understanding how the record is affected by different recovery techniques.

Archaeologists in the Department of Anthropology at The University of Tennessee have been involved in research concerned with Overhill Cherokee acculturation for several years. A review

of this research with emphasis on the approaches taken to analysis is enlightening particularly in terms of the research reported here.

Newman's (1977) analysis of European artifacts from Chota/Tanasee utilized South's (1977) classification format. Comparisons of the derived pattern with South's (1977) Frontier Artifact Pattern revealed little similarity. As a result, Newman (1977) suggested that a comparative unit--an Aboriginal Frontier Artifact Pattern--be developed based on materials from other Overhill Cherokee sites. He stressed the need to incorporate ceramic, lithic, faunal, and floral remains in addition to the European artifacts. Newman's work is important because it represents an initial attempt to look at Overhill Cherokee acculturation in terms of the quantitative patterning of archaeological remains. Secondly, it shows that South's Frontier Pattern is inappropriate for explaining patterning at contact Indian frontier sites. And finally, in retrospect, his research reveals more about British trade and the Overhill Cherokee than it does about Overhill Cherokee acculturation. A research design which examines the patterning of European artifacts through time at a contact Overhill Cherokee site is actually monitoring a British trade system. Comparisons of this information with Brown's (1979) work for the French and Indian and Harmon's (1983) investigations for the British and Lower Cherokee should shed light on trade processes operative during the eighteenth century.

Ford's (1979) analysis of Euro-American artifacts from Citico also used South's (1977) classification format as adapted by Newman (1977) but did not provide detailed comparisons of the patterns, instead stressing the need to define and substantiate the "total pattern of specific temporal segments of Overhill occupation" (Ford 1982:101). In a later analysis of the entire Citico Federal Period component, Ford (1982) modified South's (1977) classification scheme so as to incorporate not only Euro-American artifacts but ceramic, lithic, and faunal materials as well. He abstracted a Federal Period Material Culture Pattern for the Overhill Cherokee and compared it with Frontier Settler and Federal Government Patterns which he also defined. Of particular methodological importance was the development of a modified version of South's classification scheme which provided for comparisons of these patterned assemblages (Indian contact sites to one another as well as to Euro-American frontier sites).

As a result of both Newman's (1977) and Ford's (1982) research and the continuing analysis of materials from other Overhill sites (Russ and Chapman 1983; Baden 1983; Schroedl 1982), it is now possible to develop, reassess, and make predictions regarding archaeological patterns for other temporal segments of Overhill Cherokee occupation in the lower Little Tennessee River Valley. Pattern definition for the Contact Period is currently impossible because of a paucity of archaeological data. Archaeological materials suitable for defining a Colonial Period Pattern are

available and, in addition, the Mialoquo site assemblage is well suited to providing additional information about this period and the Revolutionary Period.

Building on the research already completed, and benefiting from the acculturation research others have conducted, this analysis concerns itself with exploring Overhill Cherokee material culture patterning for the Colonial through Federal Periods. Comparisons of the derived Mialoquo Pattern with the Colonial and Federal Period Patterns permit archaeological assessment of the Revolutionary Period. In addition to providing a better understanding of Overhill Cherokee material acculturation, this research offers an improved approach to the analysis of contact Indian sites, while recognizing the limitations inherent in any archaeological study (cf. Warfel 1982; Stevenson 1983).

CHAPTER II

ANALYSIS OF MATERIAL CULTURE PATTERNING

I. RESEARCH METHODOLOGY

Artifacts used in this study were classified according to a quantitative pattern recognition scheme adapted from South (1977: 92-102). South's original classification format was developed based on materials from eighteenth century Colonial-American sites and as such does not allow for the inclusion of many artifacts common in Native American assemblages. While South's original classification scheme was not designed as an acculturation model, the modifications made here illustrate its usefulness in such a context.

It is for this reason that Newman (1977), in utilizing this format in an analysis of Euro-American artifacts from Chota and Tanasee, found it necessary to add certain artifact classes and create a trade bead artifact group. His classification of aboriginally modified artifacts according to their original European function is inappropriate because actual artifact function is either incorrectly assigned or totally ignored. Furthermore, Newman's (1977:Table 13, 109-113; also see Ford 1979:93) inclusion of aboriginally modified subgroups, which define artifacts according to their true aboriginal function, in a table organized according to European functional group, class, and type designations

is equally inappropriate and misleading. Indeed, these subgroups (Types 1 through 4) provide little information regarding form or function--the two attributes which constitute the basis for class level distinction in South's scheme. Also the formulation of a trade bead artifact group does not address function and violates South's definition of group as it is restrictive providing for the inclusion of trade beads only.

Ford's (1979) analysis of Euro-American artifacts from Citico, 40MR7, relied on Newman's classification format thereby perpetuating the problems previously discussed. The format used by Carnes (1983) in the analysis of Euro-American artifacts from Tomotley (40MR5) was similar to that used by Newman (1977) and Ford (1979) except trade beads and tobacco pipes were incorporated in the Personal artifact group and the aboriginally modified artifacts were included in other functional groups (Carnes 1983).

As an extension of South's scheme, Ford (1982) developed a classification format which allows quantitative comparisons of Frontier Settler, Federal Government, and Federal Period Cherokee subcultures. This format expands Newman's (1977) work and Ford's (1979) early work by incorporating lithic, ceramic, and faunal data in addition to Euro-American artifacts. It also expands this earlier work by analyzing these patterned assemblages with respect to available documentary records placing emphasis on Cherokee culture change and acculturation.

The generalized classification scheme as originally conceived by South (1977:92-102) is organized at three levels of abstraction: group, class, and type. The particular research question being asked dictates the relevance of each level within the scheme (see Binford 1962; South 1977). For example, questions concerning variability and regularity in Overhill Cherokee material culture patterns can best be addressed at the group and class levels. Whereas, comparison at the type level is well suited to addressing specific questions regarding culture contact and acculturation such as the aboriginal reuse, modification, imitation, replacement, assimilation, or rejection of specific Euro-American artifacts (Newman 1977:89-102; Quimby 1966; White 1975).

Groups are based on the archaeological record's reflection of functional activities within systemic context (South 1977:93). It is the observer of the archaeological record who assigns functional significance to artifact classes or types. Typically this involves an intuitive process, based on shared cultural norms, envoked by the archaeologist dealing with Euro-American material culture; however, when dealing with Cherokee material culture the intuitively perceived function and intended function do not necessarily correspond. Newman (1977) dealt with this issue in two ways. First, he simply assessed the original European function for the aboriginally modified artifacts. This approach is inappropriate for constructing a Cherokee Artifact Pattern. Subsequently, he described these artifacts according to their aboriginal

modification or Native American function and placed them in an aboriginally modified group with no functional relevance (Newman 1977:Table 13, 109-113; also see Ford 1979:93). Carnes (1983), on the other hand, simply deleted the aboriginally modified group and made intuitive assessments of function for Cherokee material culture remains. Ford (1982:62, Appendix 2) was able to overcome this problem by assigning functional significance to all aboriginally modified artifacts based on ethnohistoric documentation of artifact use. Functional analysis, although not implemented, is an important tool for addressing this problem.

The class level is based on artifact form and to a lesser degree function (South 1977:93). Since any class of artifact may have served a variety of purposes in past systemic context, the assignment of classes to specific groups is necessarily somewhat arbitrary. Ford (1982) found it necessary to add a variety of artifact classes in order to classify the Native American assemblages. For example, a projectile point class was created within the arms group and a lithic tool production class was added to the activities group.

At the type level, attributes, used either singly or in combination, are the basis for distinction (South 1977:92-93). For example, paste, decoration, and glaze are attributes which distinguish European ceramic types. As previously mentioned, material culture patterning on the type level provides information regarding operative processes of culture contact.

In summary, the classification scheme designed by South (1977) and modified by Ford (1982) was utilized with appropriate alterations. Changes were made in order to accommodate the inclusion of any artifact group, class, or type not encountered in Ford's initial modification of the format which provided for incorporation of Native American assemblages. For example, steatite bowl was added as an artifact type to the kitchenware class of the kitchen group, the artifact type perforator was added to the clothing group, Native American clay pipes were included as a type within the tobacco pipe group, and a metal resource class was established within the activities group and includes specific artifact types which Ford (1982) placed in the miscellaneous hardware class of the activities group. Following Ford (1977), artifact function is based on ethnohistoric documentation of artifact use. Table 1 presents an outline of the classification scheme including group, class, and type names used in this study.

II. ARTIFACT DATA/SITE COLLECTIONS

The selection of site collections was based on: 1) the existence and availability of archaeological data; 2) an assessment of the degree of temporal control over the archaeological deposits; and 3) an assessment of the cultural affinities of the excavated materials. All artifacts were readily accessible at the Frank H. McClung Museum, The University of Tennessee, Knoxville. Generally, an examination of all the materials from a given site

Table 1. Outline of classification scheme for contact sites.

Group	Class	Artifact Type
KITCHEN	Ceramics	
		historic ceramics
		aboriginal ceramics
	Glass Bottle	
		wine/rum bottles
		misc. bottle glass
		glass container frags.
	Tableware	
		table knives
	Kitchenware	
		tinware containers
		brass kettle parts
		iron kettle lug
		steatite bowl
		milling stone/cobble
		mano
ARCHITECTURE	Window Glass	
	Nails	
	Staple	
	Tack	
	Spike	
	Door Padlock	
FURNITURE	Brass Hinge	
	Brass Tack	
ARMS	Ammunition	
		lead balls
		lead shot
		lead sprue
	Gunflints	
	Gunparts	
	Projectile Points	
		lithic
		sheet metal
CLOTHING	Beads	
	Buckles	
	Buttons	
	Clothing Eye	
	Sleeve Link	
	Scissors	
	Pin	
	Needle	
	Awl	
	Perforator	

Table 1 (Continued)

Group	Class	Artifact Type
PERSONAL	Bone Comb	
	Hair Pluckers	
	Earrings	
	Mirror	
	Finger Rings	
	Bracelets/Armlets	
	Brooches	
	Tinkler	
	Ornamental Cylinders	
	Ornamental Silver Fragments	
	Ornamental Perforated Peeble	
	Ornamental Gold/Gold Plated Frag.	
	Brass Bell	
TOBACCO PIPE	Native American Pipes	
		lithic
		clay
	Kaolin Pipes	
		stem
		bowl
		stem-bowl juncture
ACTIVITIES	Construction Tools	
		axe
		frow blade
		plane blade
		sheet brass saw
		ground chisel (lithic)
		iron gouge
		iron file
		hatchet
	Farm Tools	
		hoe
	Stable and Barn	
		saddle brace
		horse shoe
		horse shoe nail
		bridle bit
	Toys	
		Jews harp
	Fishing Hardware	
		netsinker
	Miscellaneous Hardware	
		clasp knives
		case knives

Table 1 (Continued)

Group	Class	Artifact Type
ACTIVITIES	Miscellaneous Hardware	
		knife blade
		knife bolster
		iron punch
		implement handle
		iron container frags.
		strike-a-lite
		fireflints
		cooper's tool
		drill
		graver
		abrader/whetstone
		hammerstone/pitted cobble
		celt
		side scraper
		chopper
		lithic knife
		end scraper
		denticulate
		utilized flakes
		quartz crystal
		misc. polished stone
		edge ground peeble
		hematite
		engraved slate
		misc. ground slate cobble
		abraded quartz cobble
		sandstone tablet
		utilized pieces esquilles
	Metal Resource	
		sheet metal
		metal wire
		misc. metal frags.
	Lithic Tool Production	
		unmodified flakes, cores, nodules, preforms, blade debitage, pieces esquilles
	Military Objects	
		artillery shells
		trunnion brace
SUBSISTENCE REFUSE	Fauna	

was unnecessary since reports of analysis, research manuscripts, and computer printouts were available. Specific mention is made of those cases in which it was necessary to reexamine, reanalyze, or analyze for the first time materials from the sites relevant to this study.

The Colonial Period Pattern was defined based on materials from selected features at Chota/Tanasee (40MR2/40MR62), Citico (40MR7), and Tomotley (40MR5). The definition of a Federal Period Pattern was based on materials from selected features at Chota (40MR2) and Citico (40MR7). The Mialoquo Pattern was defined based on artifacts from all Cherokee features (Colonial and Revolutionary) at the site (40MR3). The features selected from these sites for defining the Colonial and Federal Period Patterns were dated to the respective periods based on artifact content.

The recovery techniques utilized at each of these sites were variable. In most cases, all soil was screened through one-quarter inch wire mesh and a percentage of feature fill was water-screened. This fine screen percentage ranged from none up to 100 percent. A sample of this fine screen material, usually 6.25 percent, was subsequently analyzed. In order to adjust for differences in the percentage of fine screen material analyzed between sites, counts were corrected to represent a consistent 6.25 percent sample.

It should be noted that although this study is concerned exclusively with data at the assemblage profile and group levels,

data at the class and type levels and corresponding provenience information were available from other sources. The Mialoquo (Russ and Chapman 1983) and Tomotley (Baden 1983) class and type level data were provided in the respective site reports. This information for Citico was available, in part, from Ford's (1979) analysis of the assemblage. The Colonial Period clothing group (including beads) and aboriginal lithic data for Citico was obtained through a reexamination of the actual artifacts. The Chota/Tanasee class and type level data for the Colonial Period are largely unavailable from published sources, but were obtained in part from Newman's (1977, 1983) analyses, computer printouts, and, in some cases, from a reexamination of the artifacts. These data for the Chota/Tanasee Colonial Period artifacts originally classified as aboriginally modified were obtained through a reexamination of the actual artifacts. For the Federal Period, these data are available in Ford's (1982) study.

Colonial Period Assemblages

Artifacts from 32 features and one burial were selected from Chota/Tanasee (40MR2/40MR62) (Table 2). Newman's (1977, 1982) analysis of Euro-American artifacts (including Euro-American ceramics, a glass rum bottle, a silver bracelet, kaolin pipes, artillery shells, and a trunnion brace) from Chota/Tanasee dated each of these deposits to the Colonial Period. The deposits selected for analysis from 40MR2 include: Features 11, 13, 18,

Table 2. Features selected for the analysis of Overhill Cherokee material culture patterning.

Period	Site	Features
Colonial	Chota/Tanasee	
	40MR2	11, 13, 18, 52, 53, 60, 82, 87, 128, 227, 266, 294, 333, 345, 385, 405, 445, 477, 485, 494, 520, 596, 615, 633, 646, 727, 756, 758, and Burial 47
	40MR62	7, 74, 112, and 152
Colonial	Citico	
	40MR7	222, 223, 234, 243, 251, 256, 257, and 261
Colonial	Tomotley	
	40MR5	295, 326, 341, 342, 383, 389, 406, 415, and Burial 88
Colonial and Revolutionary	Mialoquo	
	40MR3	1, 2, 4-18, 20, 21, 23-30, 32, 34, 35, 37-47, 49-67, 69-81, and Post-molds 197, 494, 586, 589, 592, 593, 595, 597-601, 603, 606, 608, and 610
Federal	Chota/Tanasee	
	40MR2	233, 255, and 379
Federal	Citico	
	40MR7	170, 171, 237, 270, 271, 275, 277, and 281

52, 53, 60, 82, 87, 128, 227, 266, 294, 333, 345, 385, 405, 445, 477, 485, 494, 520, 596, 615, 633, 646, 727, 756, 758, and Burial 47. From 40MR62 Features 7, 74, 112, and 152 were selected. Although Newman (1977) indicates that Feature 223 contains ceramics dating to the Colonial Period, no information regarding the contents of this feature was available from Newman's original report, computer printouts, or the original analysis sheets and cards. Since the artifacts from this feature could not be relocated for reanalysis, it has not been included here. If the information from this feature is relocated it could be easily incorporated into the Chota Colonial Period assemblage profile.

In order to use the data from these features, it was necessary to: 1) reexamine all artifacts originally classified as aboriginally modified and assign them to a specific functional group; 2) recode the lithic artifacts so as to ensure compatibility with analysis formats used for the lithic materials from Citico, Tomotley, and Mialoquo and, subsequently, assign them to appropriate functional groups; and 3) reexamine Euro-American artifacts including beads from Features 485, 520, 596, 756, and Burial 47 at Chota and from Feature 74 at Tanasee in order to address disparities between counts provided by computer printouts, Newman's (1977) original analysis, and a recent and more complete analysis (Newman 1982).

Ford's (1979) analysis of Euro-American artifacts from Citico (40MR7) assigned eight features to the Colonial Period based

on the presence of datable Euro-American artifacts including ceramics, nails, and kaolin pipes. Materials from each of these features (222, 223, 234, 243, 251, 256, 257, and 261) were used in this study (Table 2). In order to ensure compatibility with the other data sets it was necessary to: 1) analyze the beads from each of these features as they were not examined in Ford's (1979) research; 2) undertake an analysis of the lithic materials from these features; 3) reexamine Euro-American artifacts in order to obtain an accurate count of and provenience for the clothing group artifacts; and 4) adjust the artifact counts for the fine screen materials so that they represent a 6.25 percent sample, thereby making them generally consistent with the fine screen samples from the other sites.

Eight features (295, 326, 341, 342, 383, 389, 406, and 415) and one burial (88) from Tomotley (40MR5) also were selected for this research (Table 2). Each of these deposits has been assigned to the Colonial Period based on datable ceramics (Carnes 1983). It was necessary to reclassify some of the Euro-American archaeological material according to a more appropriate functional grouping consistent with that used for the other sites. For example, in Carnes' analysis trade beads and tobacco pipes were classified as personal group artifacts but for this analysis beads were incorporated into the clothing group and tobacco pipes were reclassified as a distinct artifact group.

Federal Period Assemblages

A Federal Period Pattern has been defined by Ford (1982). Formulation of the Federal Period Pattern was based on data from the Starnes site (Feature 14 and Excavation Pit 15), Chota (Features 233, 255, and 379), and Citico (Features 170, 171, 237, 270, 271, 275, 277, and 281) (Ford 1982:54-55, 165; also see Ford 1979; Polhemus 1968). The Federal Period Pattern used in this study was redefined based on materials from only the Chota (40MR2) and Citico (40MR7) features (Table 2). Each of the features selected was dated to the Federal Period based on the presence of Euro-American ceramics, kaolin pipes, and nails. Exclusion of the Starnes data was necessary because of the small sample of materials dating to this period.

Mialoquo Assemblage

Materials excavated from 73 features (1, 2, 4-18, 20, 21, 23-30, 32, 34, 35, 37-47, 49-67, 69-81) and 16 postmolds (197, 494, 586, 589, 592, 593, 595, 597-601, 603, 606, 608, 610) at Mialoquo (Russ and Chapman 1983) were judged acceptable for use in this analysis and serve as the basis for the formulation of the Mialoquo Material Culture Pattern (Table 2). The derived pattern which is defined ethnohistorically as having, in addition to the Colonial period component, a Revolutionary Period component is expected to reflect archaeological differences unique to this time span when compared to the Colonial and Federal Period Patterns.

III. FORMULATING MATERIAL CULTURE PATTERNS FOR THE COLONIAL PERIOD, THE FEDERAL PERIOD, AND MIALOQUO

The quantified classification of all material culture remains based on functional groups (Tables 3, 4, 5, 6, 7, and 8) provided for the formulation of assemblage profiles for the Colonial Period, the Federal Period, and Mialoquo (Tables 9, 10, and 11). From the assemblage profiles, the mean percentage for each artifact group from the temporally similar sites was calculated and the respective artifact patterns resulted (Table 12).

An examination of the range of percentages for each artifact group, collectively referred to as group profiles, within each artifact pattern (Table 12) was necessary in order to check for any "dramatic variation." "Dramatic variation," although undefined by South (1977) (see Warfel 1982), is defined here as a percentage range of more than 15 percent. Artifact group profiles showing dramatic variation, or ranges of greater than 15 percent, often result from: 1) small or incomplete site samples; 2) the use of different recovery techniques between sites; or 3) specialized site or intrasite functions. If variation results from specialized behavior, adjustments are necessary to the site profiles because they represent generalized, nonspecific activities (South 1977: 102-106). Group profiles having a range of variation that is less than or equal to 15 percent exhibit a regularity in group patterning which, generally, reflects commonly held objectives, resources, and restrictions within the Cherokee culture system.

Table 3. Functional group data from selected Colonial Period features at Chota, 40MR2.

Artifact Group	Features																												Burial	Total
	11	13	18	52	53	60	82	87	128	227	266	294	333	345	385	405	445	477	485	494	520	596	615	633	646	727	756	758	47	
Kitchen	991	540	1,271	195	128	3	33	199	96	620	793	1,505	19	704	431	533	283	629	470	151	761	4,059	212	583	249	62	258	1,138	2	16,918
Architecture	2	0	5	2	0	0	0	0	3	16	13	0	0	2	0	0	4	0	4	1	3	10	3	1	1	0	0	0	0	70
Furniture	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arms	5	0	3	2	1	5	0	2	3	21	2	3	0	19	8	1	0	0	2	1	3	21	2	0	0	2	2	1	8	117
Clothing	30	25	48	110	15	208	15	3	2,759	1,541	194	409	1	224	113	245	6	0	45	21	282	553	130	79	19	37	88	87	113	7,400
Personal	0	1	5	0	0	0	0	0	2	4	0	0	0	2	1	0	0	1	4	0	6	8	3	2	0	0	5	0	6	50
Tobacco Pipes	3	2	7	0	1	3	0	1	15	2	5	12	0	3	2	4	1	0	1	0	4	135	2	0	2	2	1	24	0	232
Activities	28	21	116	22	0	64	6	17	26	133	99	46	0	163	43	11	11	6	33	14	104	336	20	51	41	22	28	31	1	1,493
Subsist. Refuse	281	140	319	1,992	45	258	2	25	206	861	994	321	7	154	57	13	116	108	40	216	204	3,104	220	1,050	15	80	661	234	0	11,723

Table 4. Functional group data from selected Colonial Period features at Tanasee, 40MR62.

Artifact Group	Features				
	7	74	112	152	Total
Kitchen	0	1,084	285	31	1,400
Architecture	2	2	0	0	4
Furniture	0	0	0	0	0
Arms	1	2	1	0	4
Clothing	0	97	3	0	100
Personal	0	1	0	0	1
Tobacco Pipes	0	8	0	2	10
Activities	0	116	28	4	148
Subsist. Refuse	1	132	112	8	253

Table 5. Functional group data from selected Colonial Period features at Citico, 40MR7.

Artifact Group	Features								
	222	223	234	243	251	256	257	261	Total
Kitchen	1,128	2,677	1,071	1,409	2,940	654	96	4,263	14,238
Architecture	2	7	4	5	11	4	2	10	45
Furniture	0	0	0	0	0	0	0	0	0
Arms	3	8	10	2	12	0	0	15	50
Clothing	77	114	57	56	447	2	2	255	1,010
Personal	1	1	0	0	5	0	0	5	12
Tobacco Pipes	5	8	0	2	2	0	0	17	34
Activities	523	1,906	917	383	310	4	35	470	4,548
Subsist. Refuse	377	1,124	507	1,159	940	7	2	805	4,921

Table 6. Functional group data from selected Colonial Period features at Tomotley, 40MR5.

Artifact Group	Features								Burial	
	295	326	341	342	383	389	406	415	88	Total
Kitchen	404	20	516	313	1,937	1,239	293	1,074	13	5,809
Architecture	1	0	12	8	11	0	0	0	0	32
Furniture	0	0	0	0	0	0	0	0	0	0
Arms	3	0	6	4	12	6	2	2	4	39
Clothing	136	1	115	24	67	63	3	29	115	553
Personal	2	0	15	2	4	2	0	0	0	25
Tobacco Pipes	8	0	9	0	1	18	0	0	0	36
Activities	89	84	84	16	250	79	30	188	1	821
Subsist. Refuse	799	75	569	349	655	317	37	166	7	2,974

Table 7. Functional group totals from Federal Period features at Chota, 40MR2 and Citico, 40MR7 (after Ford 1982: Table 4, Appendix B).

Artifact Group	40MR2 No.	40MR7 No.
Kitchen	569	14,003
Architecture	6	240
Furniture	0	0
Arms	6	97
Clothing	493	549
Personal	1	15
Tobacco Pipe	3	219
Activities	91	5,496
Subsist. Refuse	246	10,494

Table 8. Functional group data from selected features at Miloqua, 40MRJ.

| Artifact Group | Features: | 1 | 2 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 20 | 21 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 32 | 34 | 35 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | Postmolds: 197 | 494 | 586 | 589 | 592 | 593 | 595 | 597 | 598 | 599 | 600 | 601 | 603 | 606 | 608 | 610 | Total |
|---|---|---

Table 9. Colonial Period Cherokee subculture artifact assemblage profiles.

Artifact Group	40MR2/40MR62		40MR5		40MR7	
	No.	%	No.	%	No.	%
Kitchen	18,318	45.88	5,809	56.46	14,238	57.28
Architecture	74	0.19	32	0.31	45	0.18
Furniture	0	0.00	0	0.00	0	0.00
Arms	121	0.30	39	0.38	50	0.20
Clothing	7,500	18.79	553	5.37	1,010	4.06
Personal	51	0.13	25	0.24	12	0.05
Tobacco Pipe	242	0.61	36	0.35	34	0.14
Activities	1,641	4.11	821	7.98	4,548	18.30
Subsist. Refuse	11,976	30.00	2,974	28.90	4,921	19.80
Total	39,923	100.00	10,289	100.00	24,858	100.00

Table 10. Federal Period Cherokee subculture artifact assemblage profiles (after Ford 1982: Table 4, Appendix B).

Artifact Group	40MR2		40MR7	
	No.	%	No.	%
Kitchen	569	40.21	14,003	45.01
Architecture	6	0.42	240	0.77
Furniture	0	0.00	0	0.00
Arms	6	0.42	97	0.31
Clothing	493	34.84	549	1.76
Personal	1	0.08	15	0.05
Tobacco Pipe	3	0.21	219	0.70
Activities	91	6.43	5,496	17.66
Subsist. Refuse	246	17.38	10,494	33.74
Total	1,415	100.00	31,113	100.00

Table 11. Mialoquo, 40MR3, artifact assemblage profile.

Artifact Group	No.	%
Kitchen	4,794	31.77
Architecture	39	0.26
Furniture	2	0.01
Arms	134	0.89
Clothing	2,230	14.78
Personal	33	0.22
Tobacco Pipes	15	0.10
Activities	4,860	32.21
Subsist. Refuse	2,981	19.76
Total	15,088	100.00

Table 12. Cherokee subculture artifact patterns.

Artifact Group	Colonial Period		Mialoquo 40MR3	Federal Period	
	Mean	% Range	Mean	Mean	% Range
Kitchen	53.21	45.88-57.28	31.77	42.61	40.21-45.01
Architecture	0.23	0.18- 0.31	0.26	0.60	0.42- 0.77
Furniture	0.00	0.00- 0.00	0.01	0.00	0.00- 0.00
Arms	0.29	0.20- 0.38	0.89	0.37	0.31- 0.42
Clothing	9.41	4.06-18.79	14.78	18.30	1.76-34.84
Personal	0.14	0.05- 0.24	0.22	0.07	0.05- 0.08
Tobacco Pipe	0.37	0.14- 0.61	0.10	0.46	0.21- 0.70
Activities	10.13	4.11-18.30	32.21	12.05	6.43-17.66
Subsist. Refuse	26.23	19.80-30.00	19.76	25.25	17.38-33.74

The Colonial Period assemblage profiles show considerable consistency in the architecture, furniture, arms, personal, and tobacco pipe groups (Tables 9 and 12). The Federal Period assemblages exhibit consistency in the kitchen, architecture, furniture, arms, personal, and tobacco pipe group profiles (Tables 11 and 12). Mialoquo's (40MR3) assemblage profile is utilized as defined, since no data are available relative to an assessment of group profile variation (Table 10).

Although none of the Colonial group profiles exhibit dramatic variation, the clothing and activities groups exhibit the greatest percentage variation with a range of 14.73 and 14.19 percent, respectively (Tables 9 and 12). The wide profile range for the Colonial Period clothing group can be attributed to the large number of beads in the Chota/Tanasee sample. Two features, 128 and 227, both located in the townhouse area at Chota contain many beads and account for the large number observed in the Chota/Tanasee sample. The concentration of beads in these two features is explainable in terms of activities associated with the townhouse. Despite this explainable variation, the Colonial Period subculture clothing group mean of 9.41 is no more than 5.4 percent different from the Tomotley and Citico assemblage profiles (Tables 9 and 12), indicating a very consistent patterning.

The activities group profile range for the Colonial Period assemblages can be explained in terms of the wide range of behaviors reflected in the artifacts classified within this group (Tables 9

and 12). In this case, the lithic artifacts from Citico account for the high activities group percentage (18.30 percent) (Table 9). The conclusion reached here is that lithic tool production and use was a more important component in the activity sphere at Citico than at Chota/Tanasee or Tomotley. Another possible explanation is that earlier components, which are indistinguishable from Cherokee, are much better represented in the assemblage and therefore result in the large lithic artifact counts at Citico. This nondramatic variation warrants no adjustment.

In addition to the relatively large variation found in the clothing and activities Colonial group profiles, the Federal Period clothing and subsistence refuse group profiles exhibit dramatic variation. The clothing group profile range for the Federal Period assemblages is 33.08 percent (Table 12). This is attributable to the Chota artifact sample which contains a substantial concentration of beads. Because only one other Federal Period assemblage profile is available, there is no basis for adjusting the Chota clothing group profile. In this respect, the Federal Period Pattern defined here differs from that formulated by Ford (1982). He adjusted the clothing group mean from 14.05 to 3.63 percent based on the Citico and Starnes clothing group frequencies (Ford 1982: Table 4, 70). As previously discussed, the Starnes data were not used in this analysis. The mean for the Federal Period subculture clothing group used in this study does not, despite the range of

variation between the two assemblage profiles, seem unreasonable in light of the Colonial and Mialoquo Cherokee Patterns.

The profile range for the Federal Period subsistence refuse group is also great (16.36 percent) (Table 12). Ford (1982:70, Table 30) indicates that Feature 281 at Citico contained an inordinately large number of faunal remains and represents "either a specialized activity related to the butchering and preparing . . . of animals or a specific feature function such as a faunal refuse dump." In either case, the information provided by the Chota Federal Period subsistence refuse group (Table 11) is not adequate as a basis for adjustment.

In summary, although variation occurs in the Colonial and Federal Period group profiles, no adjustments were made for the purposes of this study since the observed variation was either explainable in terms of recovery or sampling or data relevant to making adjustments to the group profiles exhibiting dramatic variation were unavailable.

IV. STATISTICAL COMPARISON OF ARTIFACT PATTERNS

The relationship between the artifact patterns, defined as Colonial, Federal, and Mialoquo, was assessed by employing Kendall's Coefficient of Concordance Test, W (Siegel 1956:229-239). This nonparametric test was utilized since both the data and the method for formulating the archaeological patterns were not statistically robust. The null hypothesis, H_0, stated that the

patterns are unrelated and the alternate hypothesis, H_1, stated that at least (any) two patterns are related. The null hypothesis was accepted at the 0.05 level of significance if the value of X^2 was less than 15.51 and the alternate hypothesis was accepted at the 0.05 level of significance if the value of X^2 was equal to or greater than 15.51. The value of W was 0.911 and the calculated X^2 was 21.88 with 8 degrees of freedom (Table 13). Therefore, the null hypothesis was rejected and the alternate hypothesis accepted indicating that at least two of the patterns are significantly related.

In order to identify which of the patterns are related, each of the subculture patterns was compared with the others using the Kendall Rank Correlation Test (Siegel 1956:213-223). The null hypothesis, H_0, that the two patterns being compared are unrelated was accepted if the value of "p" was greater than 0.05 at the 0.05 level of significance. Conversely, the alternate hypothesis, H_1, that the two patterns are related was accepted if the value of "p" was less than or equal to 0.05 at the same level of significance. Statistical comparison of the Colonial Period and Mialoquo Patterns resulted in $p = 0.0029$ (Table 14). Rejection of the null hypothesis and acceptance of the alternate hypothesis suggests that these two patterns are related. This is not surprising since both patterns are subsets of Cherokee culture and Mialoquo was occupied throughout the latter half of the Colonial Period. It is interesting that the Revolutionary occupation at Mialoquo does not seem to

Table 13. Kendall coefficient of concordance: W Test.

k	Ranks Assigned to Artifact Group Frequencies of Each Subculture Pattern (N)								
	Kitch.	Arch.	Fur.	Arm.	Clth.	Per.	Pipe	Act.	Subs.
Colonial Period									
Mean f	53.21	0.23	0.00	0.29	9.41	0.14	0.37	10.13	26.23
Rank	1	7	9	6	4	8	5	3	2
Hialoquo									
Mean f	31.77	0.26	0.01	0.89	14.78	0.22	0.10	32.21	19.76
Rank	2	6	9	5	4	7	8	1	3
Federal Period									
Mean f	42.61	0.60	0.00	0.37	18.30	0.07	0.46	12.05	25.25
Rank	1	5	9	7	3	8	6	4	2
Rj	4	18	27	18	11	23	19	8	7
Sum of Squares of the deviations of Rj values from $\overline{Rj}$, S =	121	9	144	9	16	64	16	49	64

W (expressing the degree of association among patterns)

$$W = \frac{S}{1/12\ K\ (N - N)} = \frac{492}{.0833\ (9)\ (720)} = 0.911$$

Test of the significance of W

$$df = N - 1 = 8$$

X^2 (Chi Square)

$$X^2 = \frac{S}{1/12\ k\ N\ (N + 1)} = \frac{S}{.0833\ (3)\ (9)\ (10)} = 21.88$$

Table 14. Kendall rank correlation coefficient test: Colonial Period and Mialoquo.

	Ranks Assigned to Artifact Group Frequencies (N)								
	Kitch.	Subs.	Act.	Clth.	Pipe	Arm.	Arch.	Per.	Fur.
Colonial Period									
Mean f	53.21	26.23	10.13	9.41	0.37	0.29	0.23	0.14	0.00
(X) Rank	1	2	3	4	5	6	7	8	9
Mialoquo									
Mean f	31.77	19.76	32.21	14.78	0.10	0.89	0.26	0.22	0.01
(Y) Rank	2	3	1	4	8	5	6	7	9

S value for order of ranks on Y variable: $S = (7-1)+(6-1)+(6-0)+(5-0)+(1-3)+(3-0)+(2-0)+(1-0) = 26$

r (tau), the degree of correlation between two sets of ranks:

$$r = \frac{S}{1/2\ N\ (N-1)} = \frac{26}{1/2\ (9)\ (9-1)} = .722$$

Test of the significance of r, probability associated with S value = .0029 (Siegel 1956: Table Q)

have a significant effect in terms of providing deviation in the Mialoquo assemblage which would distinguish it from the strictly defined Colonial Period patterning. This finding, however, does not in any way suggest that the assemblages are identical. Indeed, even at the generalized assemblage profile and group levels differences are apparent. For example, both the arms and activities group profile means for the Colonial Period are more than tripled in the Mialoquo assemblage profile.

Computation of the relationship between the Federal Period and Mialoquo Patterns resulted in $p = 0.0063$ indicating that these two patterns are also not distinct (Table 15). Although both patterns represent Cherokee subcultures, the expectation was that the acculturative changes would result in the Federal Period being significantly different, even at this gross level of comparison, from the Mialoquo Pattern. Again, this lack of distinction should not be taken as evidence of total similarity between the patterns. Differences are obvious at all levels. For example, at the group profile level the means for all artifact groups, with the exception of the furniture group, are notably different.

The statistical test of the Colonial and Federal Period Cherokee Patterns resulted in $p = 0.00043$, revealing that these two patterns are not distinct (Table 16). This is surprising as the archaeological expectation was that these patterns would be significantly different reflecting Cherokee acculturation in the form of changes in material culture mirroring that of the Frontier

Table 15. Kendall rank correlation coefficient test: Federal Period and Mialoquo.

	Ranks Assigned to Artifact Group Frequencies (N)								
	Kitch.	Subs.	Clth.	Act.	Arch.	Pipe	Arm.	Per.	Fur.
Federal Period									
Mean f	42.61	25.25	18.30	12.05	0.60	0.46	0.37	0.07	0.00
(X) Rank	1	2	3	4	5	6	7	8	9
Nuakiqyi									
Mean f	31.77	19.76	14.78	32.21	0.26	0.10	0.89	0.22	0.01
(Y) Rank	2	3	4	1	6	8	5	7	9

S value for order of ranks on Y variable

$$S = (7-1)+(6-1)+(5-1)+(5-0)+(3-1)+(1-2)+(2-0)+(1-0) = 24$$

r (tau), the degree of correlation between two sets of ranks

$$r = \frac{S}{1/2\ N\ (N-1)} = \frac{24}{1/2\ (9)\ (9-1)} = 0.6667$$

Test of the significance of r, probability associated with S value = 0.0063 (Siegel 1956: Table Q).

Table 16. Kendall rank correlation coefficient test: Colonial Period and Federal Period.

	Ranks Assigned to Artifact Group Frequencies (N)								
	Kitch.	Subs.	Act.	Clth.	Pipe	Arm.	Arch.	Per.	Fur.
Colonial Period									
Mean f	53.21	26.23	10.13	9.41	0.37	0.29	0.23	0.14	0.00
(X) Rank	1	2	3	4	5	6	7	8	9
Federal Period									
Mean f	42.61	25.25	12.05	18.30	0.46	0.37	0.60	0.07	0.00
(Y) Rank	1	2	4	3	6	7	5	8	9

S value for order of ranks on Y variable

$$S = (8-0)+(7-0)+(5-1)+(5-0)+(3-1)+(2-1)+(2-0)+(1-0) = 30$$

r (tau), the degree of correlation between two sets of ranks

$$r = \frac{S}{1/2\ N\ (N-1)} = \frac{30}{1/2\ (9)\ (9-1)} = 0.8333$$

Test of the significance of r, probability associated with S value = 0.00043 (Siegel 1956: Table Q).

Settler Pattern. Despite no statistical distinction, apparent differences between the patterns are revealed at the group and assemblage profile levels. The most apparent differences include the increase in clothing and architectural group artifacts and the decrease in the kitchen and personal group artifacts from the Colonial to the Federal Period.

Ford's (1982:74, Table 8) statistical comparison of the Frontier Settler and Federal Period Cherokee Patterns indicated that the patterns were not distinct. In order to test the proposition that a material culture pattern defined for an earlier stage in Cherokee acculturation should deviate from the Frontier Settler Pattern, computation of the relationship between the Colonial Period Cherokee and Frontier Settler Pattern was undertaken (Table 17). The result was $p = 0.060$ indicating that these two patterns are, indeed, distinct. This can be taken as evidence of less Euro-American acculturative influence on Cherokee material culture during the Colonial Period. This also provides evidence that the Colonial Period Pattern differs from the Federal Period Pattern even though the statistical ranking test utilized here did not define those differences as significant.

The greatest contrast between the Colonial Period, Federal Period, and Mialoquo Patterns is in the kitchen, clothing, and activities groups (Table 12, page 34). The mean percentage for the kitchen group, dominated by aboriginal ceramics, decreases from the Colonial to the Federal Period dropping substantially in the Mialoquo

Table 17. Kendall rank correlation coefficient test: Frontier Settler and Colonial Period.

	Ranks Assigned to Artifact Group Frequencies (N)								
	Kitch.	Arch.	Act.	Clth.	Arm.	Subs.	Per.	Pipe	Fur.
Frontier Settler Mean f	79.00	15.45	4.44	0.40	0.34	0.23	0.07	0.07	0.00
(X) Mean	1	6	3	4	7.5	5	2	7.5	9
Colonial Period Mean f	53.21	0.23	10.13	9.41	0.29	26.23	0.14	0.37	0.00
(Y) Rank	1	7	3	4	6	2	8	5	9

S value for order of ranks on Y variable

$$S = (8-1)+(2-5)+(5-1)+(4-1)+(2-2)+(3-0)+(1-1)+(1-0) = 16$$

Calculation of Tx and Ty for tied variables

$$Tx = 1/2\ t\ (t-1) = 1/2\ (2)\ (2-1) = 1$$
$$Ty = 0$$

r (tau), the degree of correlation between two sets of ranks with tied variables

$$r = \frac{S}{1/2\ N\ (N-1) - Tx \quad 1/2\ N\ (N-1) - Ty}$$

$$= \frac{16}{1/2\ (9)\ (9-1) - 1 \quad 1/2\ (9)\ (9-1) - 0}$$

$$= 0.4507$$

Test of the significance of r, probability associated with S value = 0.0600 (Siegel 1956: Table Q).

Pattern. This may indicate a greater acceptance of Euro-American ceramics and, to a lesser degree, glassware and kitchenware items during the Federal Period. Preliminary comparisons at the class and type level indicate that this is the case. The sharp decrease in the Mialoquo kitchen group percentage probably reflects a limited availability of these items during this time span as well as less demand for them.

The clothing group mean percentages increase from the Colonial to the Federal Period (Table 12, page 34). This probably indicates a continued preference for beads, which dominate this group, as well as a selection for a wider variety of clothing items on the part of the Overhill Cherokee.

Activities group profiles for the three patterns also display differences. While the percentage means for the Colonial and Federal Periods are comparable and fall within the group profile ranges of either period, the Mialoquo mean is almost three times as great as that for the other patterns. Cherokee lithic tool production substantially increases the activity group frequencies in each of these patterns. There was, undoubtedly, a greater emphasis in this specialized behavioral area during the period Mialoquo was occupied perhaps in response to a lack of availability of Euro-American tools (both in numbers and varieties) resulting from decreased trade during the Revolutionary Period. Although this explanation is favored here, it is possible that the large number of lithic artifacts in the Mialoquo sample reflects a mixing of

Cherokee lithics with those of earlier components and a concomitant lack of ability to distinguish between.

Although perhaps less striking than the sources of contrast provided by the kitchen, clothing, and activities groups, other differences in the respective group profiles and percentage means are apparent. The architecture group profiles for the Colonial and Federal Period do not overlap. The mean for the Mialoquo group, however, falls within the Colonial Period profile range. The increase in the mean percentages of the architecture group from the Colonial to the Federal Period may indicate a gradual acceptance and adoption of Euro-American construction materials by the Cherokee, a conclusion also reached by Newman (1977) and Ford (1979, 1982).

The furniture group profiles (Table 12, page 34) for each of the artifact patterns are consistent and indicate that furniture related artifacts were either not available or not selected for by the Cherokee.

The arms group percentage means for the Colonial and Federal Periods are similar and fall within the group profiles of either period. However, the mean for the Mialoquo arms group is notably higher and outside the observed range for the other two patterns (Table 12). This emphasis on arms related artifacts indicates a Cherokee selection for items relating to subsistence or defense. This increased selection for arms group artifacts probably relates to the threat imposed by the Revolutionary War and the decreased supply of trade goods available during this period.

The personal group profiles are similar for each of the patterns (Table 12, page 34) and indicates a continued Cherokee cultural preference and selection for jewelry and ornaments.

Although the tobacco pipe group profiles overlap in the Colonial and Federal Period Patterns, the mean percentage for the Mialoquo tobacco pipe group falls outside the range of both these patterns (Table 12). The low mean for the tobacco pipe group in the Mialoquo assemblage is explainable in terms of the decreased supply of trade goods during the Revolutionary Period.

The subsistence refuse group profiles show considerable consistency as they overlap for each of the Cherokee subculture artifact patterns (Table 12). This indicates the important role of native fauna in the Cherokee diet.

Generalized comparisons of the Colonial and Federal Period Patterns indicate: 1) an increase in the relative percentages of the kitchen and personal groups and a decrease in the architecture, and clothing groups during the Colonial Period; and 2) an increase in the relative percentages of the architecture and clothing groups and a decrease in the kitchen and personal groups during the Federal Period.

Although a clear Revolutionary Period Pattern is not identifiable from the Mialoquo assemblage, an examination of the Mialoquo Pattern as it compares with the Colonial and Federal Period Patterns is useful for making predictions about a Revolutionary Period Pattern and for the identification of patterning at the

Cherokee Chickamauga sites. Based on trends observed from comparisons of the individual patterns, it is expected archaeologically that a Revolutionary Period Pattern would exhibit less emphasis on kitchen related artifacts, a strong emphasis on arms related artifacts, an increase in the number of clothing related artifacts (which continues into the Federal Period), and a significant increase in the number of activities related artifacts.

The inability to define the Revolutionary Period archaeologically can be explained in terms of 1) the relatively small Revolutionary component present at Mialoquo, 2) the fact that the Revolutionary Period is shorter (19 years long) than the other periods and hence it is more difficult to resolve time archaeologically for this period, and 3) the characteristic negative trade during the Revolutionary Period. That is, goods did not come into the area in large enough numbers to be distinctive archaeologically. The types and varieties of goods which were available during this period were no different from those available during the Colonial Period. Curation and recycling practices undoubtedly increased during this period with the continued utilization of Colonial Period goods. (This proposition, although untested here, could be pursued in future research by examining the individual artifacts in terms of evidence suggestive of reuse or modification.) As a result of these factors the Revolutionary Period is indistinguishable archaeologically from the Colonial Period Pattern.

Following the Revolutionary War, there was an influx of goods associated with the beginning of the Federal Period. This availability of goods and increased trade characterized the Federal Period and contributed to its archaeological visibility.

Both the definition of the respective patterns and the comparisons made here indicating an overall similarity for the Cherokee subcultures, provide the basis for the formulation of an Overhill Cherokee Artifact Pattern.

The Overhill Cherokee Artifact Pattern as described herein consists of two patterns: Colonial and Federal. The Contact Period is not included as it is not well represented archaeologically and the Revolutionary Period is presently not identifiable from available archaeological data. The information provided here by comparisons of the Mialoquo Pattern with the Colonial and Federal Period Patterns is relevant to the definition of an Overhill Cherokee Pattern in that it indicates some general trends in material culture change. The differences between these individual patterns are largely explainable in terms of Overhill Cherokee material acculturation. Descriptively the Overhill Cherokee Artifact Pattern (Table 12, page 34) is dominated by a large percentage of kitchen group artifacts. It is further characterized by relatively high percentages of subsistence refuse, clothing, and activities group artifacts and relatively low percentages of tobacco pipe, arms, and personal group artifacts. Furniture related artifacts are, generally, not observed.

An examination of the temporal changes in material culture patterning revealed in the Overhill Cherokee Artifact Pattern as compared with 1) changes in material culture through time for other Indian groups on the Frontier and 2) general trends which are documented in the Frontier and Carolina Patterns for Euro-American sites should allow for the abstraction of a generalized Frontier Aboriginal Artifact Pattern.

CHAPTER III

SUMMARY AND CONCLUSIONS

The purpose of this study was to explore Overhill Cherokee material culture patterning from the Colonial through the Federal Period. To this end, artifacts from dated features at Chota/Tanasee, Tomotley, Citico, and Mialoquo were grouped, in some cases reanalyzed, and classified according to a modified version of a quantitative functional classification scheme developed by South (1977).

Based on this classification scheme, assemblage profiles were constructed and material culture patterns were abstracted for the Colonial Period, the Federal Period, and Mialoquo. A major contribution of this research was the definition of a Colonial Period Material Culture Pattern for the Overhill Cherokee. Comparisons of the respective patterns was facilitated by the use of two statistical tests: the Kendall Coefficient of Concordance, W Test and the Kendall Rank Correlation Coefficient Test (Siegel 1956).

While comparisons of the Cherokee patterns revealed overall similarity and failed to distinguish the Mialoquo Pattern as Revolutionary Period, differences at the assemblage profile and group levels provided specific information relevant to understanding Overhill Cherokee material acculturation.

This research represents the most current synthesis of available information concerning Overhill Cherokee material culture

patterning from the Colonial to the Federal Period. As such it provides a framework for the creation of an Overhill Cherokee Artifact Pattern. The definition of such a pattern serves two purposes. First, it provides a basis for continuing investigations of the temporal variability in Cherokee material culture for the Contact, Colonial, Revolutionary, and Federal Periods. Information from Toqua, another Overhill site, together with that from the Middle, Lower, Valley, and Chickamauga Cherokee occupations will assuredly come available in the future and provide for continuing research into the Cherokee cultural system. Second, a Cherokee Artifact Pattern is comparable to patterns already defined for Euro-American sites. As a result, enhanced information regarding Indian contact and interaction with Europeans and Americans and, hence, the manner and degree of Cherokee acculturation can be revealed (Ford 1982; Newman 1982).

REFERENCES CITED

REFERENCES CITED

Adams, William H., Linda P. Gaw, and Frank C. Leonhardy
1975 Archaeological Excavations at Silcott, Washington: The Data Inventory. Report of Investigations, 53, Laboratory of Anthropology, Washington State University, Pullman.

Baden, William W.
1983 Tomotley: An Eighteenth Century Cherokee Village. Report of Investigations, 36, Department of Anthropology, University of Tennessee, Knoxville.

Binford, L. R.
1962 Archaeology as Anthropology. American Antiquity 28:217-225.

1968 Archaeological Perspectives. In New Perspectives in Archaeology, edited by S. R. and L. R. Binford, pp. 5-32. Aldine, Chicago.

Bogan, Arthur E.
1976 A Zooarchaeological Analysis of Vertebrate Remains from Chota-Tanasi: A Historic Cherokee Village in the East. Unpublished M.A. thesis, Department of Anthropology, University of Tennessee, Knoxville.

1983 Faunal Remains from the Historic Cherokee Occupation at Citico (40MR7), Monroe County, Tennessee. Tennessee Anthropologist 8:28-49.

Brown, Ian W.
1979 Functional Group Changes and Acculturation: A Case Study of the French and the Indian in the Lower Mississippi Valley. Mid-Continental Journal of Archaeology 4:147-165.

Carnes, Linda F.
1983 An Analysis of Euro-American Artifacts. In Tomotley: An Eighteenth Century Cherokee Village, by William W. Baden, Appendix I. Report of Investigations, 36, Department of Anthropology, University of Tennessee, Knoxville.

Duran, Meliha S. and C. T. McKeown
1980 Historic Artifacts. In Prehistory and History of the Ojo Amarillo, edited by David T. Kirkpatrick, pp. 1023-1043, 1124-1130, 1157-1166. Report prepared for the National Park Service.

Fitting, J.
1976 Patterns of Acculturation at the Straits of Mackinac. In Cultural Change and Continuity: Essays in Honor of James Bennett Griffin, edited by Charles Cleland, pp. 321-334. Academic Press, New York.

Ford, Thomas B.
1979 A Descriptive Analysis of the Euro-American Artifacts from the Citico site (40MR7), 1978 Excavation. In The 1978 Archaeological Investigations at the Citico site (40MR7), edited by Jefferson Chapman, pp. 42-103. Report submitted to the Tennessee Valley Authority.

1982 An Analysis of Anglo-American/Cherokee Culture Contact During the Federal Period, the Hiwassee Tract, Eastern Tennessee. Unpublished M.A. thesis, Department of Anthropology, University of Tennessee, Knoxville.

Harmon, Michael A.
1983 Cherokee Acculturation in Northwestern South Carolina. Paper presented at the 40th Southeastern Archaeological Conference, Columbia.

Linton, Ralph
1940 Acculturation in Seven American Indian Tribes. Appleton-Century Company, New York.

Newman, Robert D.
1977 An Analysis of the European Artifacts from Chota-Tanasee: An Eighteenth Century Overhill Cherokee Town. Unpublished M.A. thesis, Department of Anthropology, University of Tennessee, Knoxville.

1982 Euro-American Artifacts. In Overhill Cherokee Archaeology at Chota-Tanasee, edited by Gerald F. Schroedl, pp. 1036-1216. Report submitted to the Tennessee Valley Authority and the National Park Service.

Plog, Fred T.
1974 The Study of Prehistoric Change. Academic Press, New York.

Polhemus, Richard
1968 Starnes (40MR32). Field notes and artifact analysis notes, on file, McClung Museum, The University of Tennessee, Knoxville.

Quimby, George
1966 Indian Culture and European Trade Goods. The University of Wisconsin Press, Madison.

Redfield, R., R. Linton, and M. Herskovits
1936 Memorandum for the Study of Acculturation. American Anthropologist 38:149-152.

Russ, Kurt C.
1982 Archaeological Investigations at Mialoquo--An Eighteenth Century Overhill Cherokee Town. Paper presented at the 39th Southeastern Archaeological Conference, Memphis.

Russ, Kurt C. and Jefferson Chapman
1983 Archaeological Investigations at the Eighteenth Century Overhill Cherokee Town of Mialoquo (40MR3). Report of Investigations, 37, Department of Anthropology, University of Tennessee, Knoxville.

Schroedl, Gerald F.
1978 Louis-Phillipe's Journal and Archaeological Investigations at the Overhill Cherokee Town of Toqua. Journal of Cherokee Studies 3:206-220.

Schroedl, Gerald F. (editor)
1982 Overhill Cherokee Archaeology at Chota-Tanasee. Report submitted to the Tennessee Valley Authority and the National Park Service.

Schroedl, Gerald F. and Kurt C. Russ
1982 An Introduction to the Ethnohistory and Archaeology of Chota and Tanasee. In Overhill Cherokee Archaeology at Chota-Tanasee, edited by Gerald F. Schroedl. Report submitted to the Tennessee Valley Authority and the National Park Service.

Siegel, Sidney
1956 Nonparametric Statistics for the Behavioral Sciences. McGraw-Hill, New York.

South, Stanley
1974 Palmetto Parapets. Anthropological Studies No. 1. The Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

1977 Method and Theory in Historical Archeology. Academic Press, New York.

South, Stanley
1978 Pattern Recognition in Historical Archaeology. American Antiquity 43:223-230.

Spicer, W. W. (editor)
1961 Perspectives in American Indian Culture Change. University of Chicago Press, Chicago.

Stevenson, Marc G.
1983 Pattern in Pattern Recognition? The Conference on Historic Site Archaeology Papers 1980 15:57-70.

Thomas, David H.
1979 Archaeology. Holt, Rinehart, and Winston, New York.

Warfel, Stephen G.
1982 A Critical Analysis and Test of Stanley South's Artifact Patterns. The Conference on Historic Site Archaeology Papers 1979 14:137-190.

Watson, Patty Jo, Steven A. LeBlanc, and Charles L. Redman
1971 Explanation in Archeology: An Explicitly Scientific Approach. Columbia University Press, New York.

White, J. R.
1975 Historic Contact Sites as Laboratories for the Study of Culture Change. The Conference on Historic Site Archaeology Papers 1974 9:153-163.

VITA

Kurt C. Russ was born in Lexington, Virginia on June 2, 1956. He attended Natural Bridge High School graduating as valedictorian in June 1974. The following September he entered Washington and Lee University, receiving a Bachelor of Arts with honors in June 1978. During the 1978-1979 academic year he was engaged in archaeological research having been named Liberty Hall Scholar at Washington and Lee University. He entered the Graduate School at The University of Tennessee, Knoxville, in September 1979. The Master of Arts degree with a major in Anthropology was awarded in December 1984.

The author has accepted a full-time position as Research Archaeologist at Washington and Lee University, Lexington, Virginia.

He is married to the former Linda Carol Anderson of Buena Vista, Virginia.